

Quiz

An object starts from rest at $t=0$ and begins to travel along the positive x axis with acceleration $a(t) = \alpha - \beta t$, where both α and β are positive constants. Which will reach 0 first, the velocity or acceleration?

- (a) velocity reaches 0 first
- (b) acceleration reaches 0 first
- (c) v and a reach 0 at the same time
- (d) not enough information

Quiz

An object of mass M lies on an inclined plane that makes the angle θ with respect to the horizontal. The force due to gravity is $F = Mg$ straight down. In the coordinate system shown, what are the x and y components of \vec{F} ?

- | F_x | F_y |
|----------------------|-------------------|
| a) $Mg \cos \theta$ | $-Mg \sin \theta$ |
| b) $-Mg \cos \theta$ | $-Mg \sin \theta$ |
| c) $Mg \sin \theta$ | $-Mg \cos \theta$ |
| d) $-Mg \sin \theta$ | $-Mg \cos \theta$ |
| e) None of above | |

